

T> Unlicensed Devices and Equipment Approval>

> Exalt Communications is a manufacturer of broadband wireless backhaul microwave radios. The radios transmit with high duty cycles and high transmit power whose performance approximates the regulatory limit in FCC Parts 15.247 and 15.249 of the rules in the 2.4 and 5.8 GHz unlicensed bands.

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> In considering spectral etiquette in the 915 MHz spectrum, the Commission requested comments on the need to adopt rules for digitally modulated transmitters or other devices operating in the 2.4 GHz and 5.8 GHz bands to better facilitate shared use of the spectrum. The rules that are being considered with regard to spectrum etiquette on the 915 MHz spectrum would affect products manufactured for 2.4 GHz and 5.8 GHz if the rules are adopted unilaterally in FCC Parts 15.247 and 15.249 as the Unlicensed bands are included in the same Rule part. These responses, unless otherwise specifically stated, are directed at the affect such changes would have on the 2.4 GHz and 5.8 GHz bands and how it relates to the fixed Point to Point (PTP) industry. Responses are numbered in accordance with ET Docket 03-201; FCC 07-117.

> 1. The proposal, if adopted, would require that spectral etiquette requirements on products such as digitally modulated transmitters. It would be required that such transmitters operate at less than 1 Watt if they are continuously silent less than 90% of the time within a 0.4 second interval. The maximum power permitted would be decreased in accordance with a specified formula as the silent interval between transmissions decreases. Almost all ISM products used for outdoor Point to Point (PTP) applications are either NEVER silent, or silent for no more than 50% of the time. This would obviate the suggestion that spectrum etiquette rules, if introduced, would be applied if such a proposal were to be accepted and implemented by the Commission. Since the Fixed PTP wireless systems are professionally installed in fixed location and intended to provide backhaul for voice and data, any reduction in transmit power, whether it be automatically controlled or based upon the parameters of the silent time, would make most of these PTP applications obsolete, as the reduction in transmitter power would result in extremely low EIRP levels, and thus only very short distances could be accomplished, and only with very large sized antennas. Exalt Communications strongly requests that fixed PTP wireless backhaul equipment be exempt from any and all spectrum etiquette rules that would

reduce the current transmit power below that which is currently in the Rules.

> 2. The NPRM is seeking balance between co-existing different types of unlicensed devices with the concerns about inhibiting unlicensed device innovation in whether spectrum etiquette is necessary and what form it would take. Exalt Communications supports innovation and any Rule changes that encourage and expedite innovation in bands and on product types that are not causing the elimination of the business that currently exists. The present EIRP differentiation between PTP and Point to Multipoint (PMP) systems in these bands, combined with good radio engineering practices and good radio performance, seems to allow for excellent spectrum sharing today. We support rule changes that provide new applications rather than limit those that are currently in significant use.

> 3. Spectrum etiquette could be comprised of listen before talk monitoring or other requirements that enable better sharing of the spectrum involving duty cycle, output power, and bandwidth. Exalt Communications does not support any change in the current Rules that would cause the reduced penetration of the fixed PTP business that currently exists

> 4. The proposal indicates that transmitters that transmit continuously are creating emissions at levels that cause interference to incumbent devices and the tolerance of currently operating devices to emissions in other devices and how spectrum etiquette would improve spectrum sharing.

Potential for spectrum etiquette to limit design and stifle unlicensed product innovation is suggested. Exalt Communications believes that transmitters that transmit in accordance with 47 CFR 15.247 (c) (1) for Fixed PTP systems are not the offenders which are creating emissions at levels that cause interference to incumbent devices and the tolerance of currently operating devices to emissions in other devices and how spectrum etiquette would improve spectrum sharing. Additionally, PTP systems are generally narrow beam widths and are typically installed at an elevation higher than the devices and are much less likely to be subjected to or cause such interference. The potential for spectrum etiquette to limit design and stifle unlicensed product innovation is likely.

> 5. Maximum permitted power would range from 30dBm (1 Watt) when there is a continuous silent interval of at least 90% between transmissions, down to 0dBm (0.001 W) when there is no silent interval between

transmissions, with the power linearly interpolated between 90% silent and continuous duty cycle values. Exalt Communications does not feel that reducing the power level of fixed PTP radios is necessary. Exalt Communications strongly recommends that Commission exempt fixed PTP radios from any and all spectrum etiquette regulations that reduce the transmit power because of low silent intervals.

> 6. Spectrum etiquette which enables more efficient sharing of spectrum between devices, or whether another type of etiquette would be more appropriate is suggested. Exalt Communications encourages the Commission to introduce spectrum etiquette to enable more efficient sharing of spectrum between devices as long as specific categories of products that rely on low silent time and high transmit power with narrow beam widths, such as Fixed PTP radios, are not affected by such legislation when their risk of interfering with or causing interference to dissimilar products covered by the same rule part.

> 7. Prohibiting the synchronization of transmissions from multiple devices in a system or otherwise under control of the same party in such a way as to more fully occupy the silent intervals between transmissions is suggested. Exalt Communications suggests that the synchronization of transmissions from multiple devices may be utilized in such a way as to permit multiple devices on a single tower operate in the same part of the spectrum without interfering with one another. Synchronization actually has the opportunity to CONSERVE spectrum, rather than cause more interference. For example, Exalt products support the installation of multiple synchronized transmitters at the same location so that the transmitters may use the same frequency channel. Without synchronization, the transmitters would have to be tuned to different frequency channels, or they will cause self-interference at the multi-transmitter site. Thus, synchronization conserves spectrum. Exalt Communications opposes the action by the Commission as it is currently written.

> 8. The Commission asks if a device under the rules should be permitted to automatically change the power level and duty cycle at which it operates or if the devices should be required to operate using only one fixed duty cycle/power level combination. Exalt Communications supports the technological advancement of products and applications in the band which includes automation of signal control in order to comply. It could be considered that automatic power and duty cycle as well as fixed duty cycle/power levels would be considered compliant with a

regulation.>

> 9. The Commission asks for input on the types of devices to which an etiquette requirement should apply: Digital vs. spread spectrum. Exalt Communications feels that the etiquette requirements, if introduced, should apply to digital and spread spectrum devices alike. Applying requirements to one type or the other would unfairly favor one technology over another in that the implementation costs, reduced power level, > "> listen before speak"> "> requirements would not come without development time and costs.

> 10. The Commission asks if similar requirements are needed to in 2.4 and 5.8 GHz bands to facilitate shared use of the spectrum. Exalt Communications strongly suggests that Fixed PTP applications be exempt from any such spectral etiquette requirements which would require that the power level and/or duty cycle are reduced in Fixed PTP products.

> 11. The Commission asks for cut-off dates for the product approvals for any spectral etiquette requirements that are introduced. Exalt Communications feels that products currently approved should be grandfathered should such requirements be introduced. Exalt Communications encourages the Commission to specifically exempt PTP products. by application date should requirements be introduced. Interference with other devices and overtaking a part of the spectrum should be irrespective of date of application and/or grant date.

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<CITY> Campbell

<STATE> CA

<ZIP> 95008

<LAW-FIRM>

<ATTORNEY>

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Equipment Approval
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